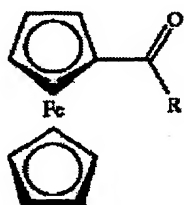


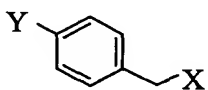
## CLAIMS

1. A method for synthesizing ferrocenyl substituted styrene having the following Formula III, which comprises: a) reacting ferrocenecarbonyl having the following Formula I with toluene halide having the following Formula II in an ether solvent and in the presence of magnesium as a catalyst; b) introducing a liquid portion of the resulting reaction mixture into a silica gel column; c) eluting the silica gel column with a solvent of low polarity; d) collecting the resulting eluate from the column; e) and evaporating the solvent from the eluate to obtain a solid comprising ferrocenyl substituted styrene (III):



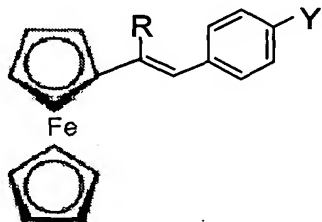
(I)

- 10 wherein R is hydrogen or C1-C4 alkyl;



(II)

wherein X is a halogen; Y is a halogen, hydrogen or C1-C4 alkyl;



(III)

wherein R and Y are defined as above.

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2. The method according to claim 1, wherein X is bromine, and Y is hydrogen or C1-C4 alkyl.

3. The method according to claim 1, wherein R is hydrogen or methyl.

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4. The method according to claim 1, wherein the ether solvent is tetrahydrofuran or ethyl ether.

5. The method according to claim 4, wherein the ether solvent is tetrahydrofuran.

5        6. The method according to claim 1, wherein said solvent of low polarity is n-hexane, ethyl acetate or a mixture of them.

7. The method according to claim 1, wherein said reaction in step a) is carried out at room temperature for a period of 3-48 hours.

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8. The method according to claim 1, wherein said liquid portion is kept in the silica gel column for a period of 6-96 hours in step b).

9. The method according to claim 1, wherein a mole ratio of said toluene  
15 halide (II) to said ferrocenecarbonyl (I) in said reaction in step a) ranges from 0.1 to 20.

10. The method according to claim 9, wherein said mole ratio of said toluene halide (II) to said ferrocenecarbonyl (I) is about 1.5.

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11. The method according to claim 1, wherein a mole ratio of said magnesium catalyst to said ferrocenecarbonyl (I) in said reaction in step a) ranges from 0.1 to 20.

25        12. The method according to claim 11, wherein said mole ratio of said magnesium catalyst to said ferrocenecarbonyl (I) is about 3.